

**IN THE CLAIMS:**

1. (Original) In a method for forming a porous silica film using a hydrolyzable alkoxy silane compound, water, an alcohol and a surfactant and acidic or alkaline catalyst, the method for forming a porous silica film, which comprises using comprising:

acid hydrolysis or alkaline hydrolysis of the hydrolysable alkoxy silane compound,  
utilizing one or more kinds of nonionic surfactant(s) having a 0.1 weight %  
concentration according to the Du Nouy method expression and a surface tension of 45  
mN/m or larger at 25°C as the surfactant,

coating a mixed solution obtained by mixing the nonionic surfactant, the  
alkoxy silane compound, water and the alcohol on a substrate,

and decomposing or burning out the surfactant in the mixed solution, and  
wherein said hydrolyzable alkoxy silane compound is from 0.05 to 0.5 mole of a  
dimethyldialkoxy silane compound represented by Si(CH<sub>3</sub>)<sub>2</sub>(OR)<sub>2</sub> where a substituent R  
denotes a methyl group or an ethyl group.

2. (Currently Amended) The method for forming a porous silica film  
according to claim 1, wherein the nonionic surfactant comprises a polyoxyethylene-  
polyoxypropylene condensate represented by [Chemical formula 1]  
 $\text{OH}(\text{CH}_2\text{CH}_2\text{O})^x(\text{CH}(\text{CH}_3)\text{CH}_2\text{O})^y(\text{CH}_2\text{CH}_2\text{O})^x\text{H}$  where [Chemical formula 1](In a  
rational formula [Chemical formula 1], x and y denote an integer satisfying 1≤x≤185 and  
5≤y≤70, respectively.) respectively.

3. (Currently Amended) The method for forming a porous silica film according to claim 2, wherein a mixing ratio in the mixed solution is 8 to 50 mole of the water, and 0.1 to 0.5 mole of the polyoxyethylene-polyoxypropylene condensate represented by  $\text{OH}(\text{CH}_2\text{CH}_2\text{O})^x(\text{CH}(\text{CH}_3)\text{CH}_2\text{O})^y(\text{CH}_2\text{CH}_2\text{O})^x\text{H}$  [Chemical formula -1] relative to 1 mole of the alkoxysilane compound.

4. (Canceled)

5. (Currently Amended) The method for forming a porous silica film according to any one of claims 1 to 3 [[4]], wherein a mixed surfactant obtained by mixing a cationic ~~or nonionic surfactant~~ into the nonionic surfactant is used as the surfactant.

6. (Currently Amended) The method for forming a porous silica film according to any one of claims 1 to 3 [[4]], wherein a worm-hole porous structure can be observed by a sectional transmission electron microscope in a silica film formed by decomposition or burning out the surfactant.

7. (Original) The method for forming a porous silica film according to claim 5, wherein a worm-hole porous structure can be observed by a sectional transmission electron microscope in a silica film formed by decomposition or burning out the surfactant.